

AMENDMENTS TO THE DRAWINGS

Please substitute the attached set of drawings for all previously submitted drawing sets. The attached set of drawings includes an amended Figure 3.

Attachment: Replacement Sheet(s)
Annotated Sheet Showing Changes

REMARKS

The drawing objection relating to claim 8 has been overcome by amendment and Figure 3 has been amended to show a large diameter pump section 230 of the blood tube. The drawing amendment does not add new matter because para. 0020 of the application discloses a large diameter pump section of the tube.

The rejection of claim 29 as being anticipated by Sunden (US Patent 6,494,693) is traversed.

Sunden does not disclose the following limitation of claim 29:

wherein said narrow section comprises at least one half of an entire length of the blood tube and wherein said length of the blood tube includes the first end, first tapered tube transition section, narrow section, pump tube section, second tapered tube transition section and the second end

The above limitation distinguishes Sunden that shows a narrow diameter “pump tube” which is a short blood tube that engages a pump. Sunden does not suggest that sections of a blood tube be narrow, other than at the pump tube. A length of blood tube that fits into a pump (as taught by Sunden) does not constitute at least half of an entire tube as required by claim 29. Further, Sunden does not teach a large diameter tube section in addition to a narrow blood tube as is recited in the claims.

Contrary to the rejection, Figure 2A of Sunden does not indicate that the inlet portion end 12A and outlet portion end 12B of the pump tube are shorter than the pump

section of tube 14. In Sunden, the jagged ends of the illustrated inlet and outlet ends 12A, 12B in Figure 2A and the extended lengths of these inlet and outlet ends in Figure 1A indicate that the pump tube section is substantially shorter than the inlet and outlet ends. Further, the text of Sunden states that the inlet 12A is attached to a fluid container and the outlet end 12B is attached to another fluid container. Sunden, col. 7, lns. 19-25. The lengths of the inlet and outlet tube sections 12A, 12B needed to attach to containers that are substantially longer than the narrow tube section that constitutes the pump tube. Accordingly, Sunden does not disclose a blood tube having a narrow section that comprises at least one half the length of the blood tube and the anticipation rejection should be withdrawn.

The rejection of dependent claim 30 as being obvious over Sunden is traversed for the same reasons that the rejection of claim 29 is traversed.

Sunden teaches away from the claimed invention by disclosing a blood tube that has an inlet and outlet sections 12A, 12B that have large diameters and a short tube section to be inserted in the pump. Sunden does not suggest a narrow diameter section of the tube that is distinct from the pump tube section and the inlet and outlet sections, as is recited in claim 30. This disclosure in Sunden is contrary to the tube recited in claim 30 that has a pump tube section and a narrow tube section that is not part of the pump tube section. A reference that teaches away from a claimed invention, such as Sunden, should not be applied to support an obviousness rejection. *In re Geisler*, 43 U.S.P.Q.2d 1362 (Fed. Cir. 1997) (“a prima facie case of obviousness can be rebutted if the applicant ...

(2) can show "that the art in any material respect taught away" from the claimed invention.”). Further, the disclosure in Sunden of various diameters of blood tube sections is not a teaching, disclosure or suggestion of the specific blood tube recited in claim 30.

The rejection of claims 1, 2, 4 to 28 and 31 as being obvious over Sunden in view of Raible (U.S. Patent No. 4,954,055) is traversed.

The independent claims 1, 15, 19 and 31 require a narrow tube section that is at least as long as one-half of the entire length of the tube. This feature is not shown in Sunden or Raible.

Sunden does not teach a narrow section that is at least one half the length of the blood tube for the reasons discussed above. Further, the claims define a “pump tube section” that is distinct from the narrow tube section. In contrast, Sunden discloses a small diameter pump tube section and provide no suggestion of a narrow tube section that is distinct from the pump tube section, as is required by the rejected claims.

Raible teaches away from the claimed invention by disclosing a tube having small diameter ends and a large diameter center section. Raible teaches away from a narrow section between the pump section of the tube and the inlet/outlet to the tubes, as is recited in the rejected claims. Sunden and Raible teach opposite approaches to a pump section of a blood tube. Sunden teaches a narrow tube section that engages a pump and Raible teaches a large diameter tube section to engage a pump. Given these conflicting teachings, it is not seen how these two references can be combined or the shape of a

blood tube that would result from such a combination. Accordingly, the combination of Raible and Sunden would not have rendered obvious independent claims 1, 15, 19 and 31.

Independent claim 27 requires a middle portion of the tube having a small inside diameter that is smaller than the inside diameter of a first end of the tube and a pump section of the tube having a cross-sectional passage area larger than that of the middle portion of the tube. As discussed above, Sunden does not disclose a middle section of a blood tube that is distinct from the pump section of the tube and has the dimensional features recited in claim 27. Raible does not disclose a narrow diameter middle section of the blood tube. The combination of Sunden and Raible does not yield a blood tube as recited in claim 27.

With respect to the dependent claims, the combination of Raible and Sunden do not disclose:

- a narrow section that is not engaged with a pump, as recited in claim 2.
- a constant wall section, as recited in claims 5, 16, 17, 21, 22. Raible does not disclose the wall thickness of a blood tube. Sunden appears to show a change in the wall thickness in Figures 2B, 2C and 2D, but the text of Sunden does not discuss the wall section thickness of a blood tube.

All claims are in good condition for allowance. If any small matter remains outstanding, the Examiner is requested to telephone applicants' attorney. Prompt reconsideration and allowance of this application is requested.

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: /Jeff Nelson/

Jeffrey H. Nelson
Reg. No. 30,481

JHN:glf
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100

